

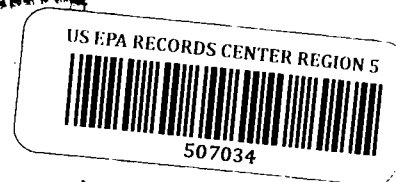
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Proposed QA/QC Project for Polynuclear
Aromatic Hydrocarbon Analysis

Sandra S. Gardebring
Director, Enforcement Division

Original Signed by Sandra S. Gardebring

Andrea Jirka, Acting Chief
Central Regional Laboratory



A major United States Environmental Protection Agency (U.S. EPA), Region V hazardous waste/Superfund enforcement case is Reilly Tar and Chemical Company in St. Louis Park, Minnesota. There is extensive contamination of both the soil and several different groundwater flow systems below the site from past coal tar refining and wood preserving operations.

The Agency is currently involved in formulating and evaluating various remedial strategies and needs to accurately determine the extent of contamination by polynuclear aromatic hydrocarbon (PAH) compounds. Both the Agency and the Minnesota Pollution Control Agency (MPCA) have used several different labs for PAH analysis using high pressure liquid chromatography (HPLC). It is anticipated that over 200 additional samples will need to be analyzed for PAHs in the next six months. Both U.S. EPA and MPCA enforcement staffs have realized that there is a definite need for a QA/QC program to insure accurate results for analysis of low level (often less than 20 ng/l) carcinogenic PAH compounds by a complex and relatively new analytical procedure such as HPLC.

I request that CRL prepare six water samples spiked with low known concentration of two (2) or more different PAH compounds. Although spikes of other PAH compounds may be used, the following PAH compounds are frequently found in contaminated St. Louis Park wells:

Acenaphthene
Anthracene
Benzo(a)pyrene
Benzo(a,h,i,j) perylene
Chrysene
Fluoranthene
Naphthacene
O-phenylenepyrene
Pyrene

These samples should be sent to GCA-Technology Division in Bedford, Massachusetts for analysis. This should be coordinated with Enforcement Division. After the analytical results and procedures are submitted back to Enforcement, both CRL and the Quality Assurance Office will be asked to review the results for accuracy. A quick turn-around time is required.

This program may be expanded if additional contract labs are used, additional sampling is required, or analysis of these spiked samples indicate a problem of inaccurate results. Please contact Jim Pankanin, an engineer on my staff at 886-6769 if you have any questions about this project.

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cc: QAO/Adams
Fenner/Miner/Muno
Leininger

PANKANIN: srj 8/26 3-2110 MUNO Wey 8/26/81 LEININGER 8/26/81 MYERS 8/27/81
MANZARDO 8/27/81 FENNER 8/26/81 BRYSON 8/26/81
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GARDEBRING